CLAIMS

We claim:

1. A system for managing speakerphone operation in a communications device, comprising:

a first voice activity detector, configured to communicate with an inbound path of the communications device, the first voice activity detector generating at least first voice data based upon a signal in the inbound path;

a second voice activity detector, configured to communicate with an outbound path of the communications device, the second voice activity detector generating at least second voice data based upon a signal in the outbound path; and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

2. A system according to claim 1, wherein the inbound path is coupled to an input transducer.

3. A system according to claim 2, wherein the input transducer comprises a microphone.

4. A system according to claim 1, wherein the outbound path is coupled to an output transducer.

5. A system according to claim 4, wherein the output transducer comprises a speaker.

6. A system according to claim 1, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

7. A system according to claim 1, wherein the first voice data comprises at least one of a first voice energy signal, a first voice envelope, a first voice sample, and a first voice present signal.

8. A system according to claim 1, wherein the second voice data comprises at least one of a second voice energy signal, a second voice envelope, a second voice sample and a second voice present signal.

9. A system according to claim 1, wherein the controlling performed by the processor comprises awarding control of a communications channel to one of the inbound path and the outbound path based upon a comparison of the first voice data and the second voice data.

10. A system according to claim 9, wherein the communications channel comprises a wireless communications channel.

11. A system according to claim 1, wherein the signal in the inbound path comprises at least a voice signal of a local user.

12. A system according to claim 1, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

13. A system according to claim 1, further comprising a comfort noise generator, the processor communicating with the comfort noise generator to generate

comfort noise at selected times based on at least one of the first voice data and the second voice data.

14. A system according to claim 1, further comprising an echo canceller, the echo canceller being coupled to the inbound path to cancel at least a portion of the signal in the outbound path.

15. A system according to claim 1, wherein the inbound channel further comprises a speech encoder module.

16. A system according to claim 1, wherein the outbound channel further comprises a speech decoder module.

17. A system according to claim 1, further comprising an interface to a modem transmitter module.

18. A system according to claim 1, further comprising an interface to a modem receiver module.

19. A method for managing speakerphone operation in a communications device, comprising:

generating at least first voice data based upon a signal in an inbound path of the communications device;

generating at least second voice data based upon a signal in an outbound path of the communications device; and

controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

20. A method according to claim 19, wherein the inbound path is coupled to an input transducer.

21. A method according to claim 20, wherein the input transducer comprises a microphone.

22. A method according to claim 19, wherein the outbound path is coupled to an output transducer.

23. A method according to claim 22, wherein the output transducer comprises a speaker.

24. A method according to claim 19, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

25. A method according to claim 19, wherein the first voice data comprises at least one of a first voice energy signal, a first voice envelope, a first voice sample, and a first voice present signal.

26. A method according to claim 19, wherein the second voice data comprises at least one at least one of a second voice energy signal, a second voice envelope, a second voice sample, and a second voice present signal.

27. A method according to claim 19, wherein the step of controlling comprises awarding control of a communications channel to one of the inbound path and the outbound path based upon a comparison of the first voice data and the second voice data.

28. A method according to claim 27, wherein the communications channel comprises a wireless communications channel.

29. A method according to claim 19, wherein the signal in the inbound path comprises at least a voice signal of a local user.

30. A method according to claim 19, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

31. A method according to claim 19, further comprising generating comfort noise at selected times based on at least one of the first voice data and the second voice data.

32. A method according to claim 19, further comprising canceling at least a portion of the signal in the outbound path from the inbound path.

33. A method according to claim 19, wherein the inbound channel further comprises a speech encoder module.

34. A method according to claim 19, wherein the outbound channel further comprises a speech decoder module.

35. A method according to claim 19, wherein the communications device further comprises a modem transmitter module.

36. A method according to claim 19, wherein the communications device further comprises a modem receiver module.

37. A system for managing speakerphone operation in a communications device, comprising:

first executable code, the first executable code generating at least first voice data based upon a signal in an inbound path of the communications device;

second executable code, the second executable code generating at least second voice data based upon a signal in an outbound path of the communications device; and

third executable code, the third executable code controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

38. A communications system, comprising:

a communications device, the communications device comprising-

a first voice activity detector, communicating with an inbound path, the first voice activity detector generating at least first voice data based upon a signal in the inbound path,

a second voice activity detector, communicating with an outbound path, the second voice activity detector generating at least second voice data based upon a signal in the outbound path, and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data;

a transceiver; and

a wireless channel, coupled to the transceiver, the wireless channel configured to communicate with the inbound path and the outbound path of the communications device.

39. A system for managing speakerphone operation in a communications device, comprising:

voice activity detection means, communicating with each of an inbound path and an outbound path each of the communications device, the voice activity detection means generating at least first voice data based upon a signal in the inbound path and at least second voice data based upon a signal in the outbound path; and

processing means, configured to communicate with the voice activity detection means, the processing means controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

40. A system for managing speakerphone operation in a communications device, comprising:

executable voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least first voice data based upon a signal in the inbound path and at least second voice data based upon a signal in the outbound path; and

a processor, configured to interface with the executable voice activity detection code, the processor controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

41. A system for managing speakerphone operation in a communications device, comprising:

a processor, the processor being configured to execute-

voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least first voice data based upon a signal in the inbound path and at least second voice data based upon a signal in the outbound path, and

arbitration code, the arbitration code controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

42. A system for managing speakerphone operation in a communications device, comprising:

a first voice activity detector, configured to communicate with an inbound path of the communications device, the first voice activity detector generating at least a first voice detection signal based upon at least a first voice threshold applied to a signal in the inbound path;

a second voice activity detector, configured to communicate with an outbound path of the communications device, the second voice activity detector generating at least a second voice detection signal based upon at least a second voice threshold applied to a signal in the outbound path; and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal.

43. A system according to claim 42, wherein the first voice detection signal comprises an assertable first voice present signal and the second voice detection signal comprises an assertable second voice present signal.

44. A system according to claim 43, wherein the comparison comprises testing for the assertion of the first voice present signal and the second voice present signal.

45. A system according to claim 44, wherein the processor awards control of a communications channel to the inbound path when the first voice present signal is asserted and the second voice present signal is not asserted.

46. A system according to claim 44, wherein the processor awards control of a communications channel to the outbound path when the first voice present signal is not asserted and the second voice present signal is asserted.

47. A system according to claim 44, wherein the processor awards control of a communications channel to the inbound path when the first voice present signal is asserted and the second voice present signal is asserted.

48. A system according to claim 44, wherein the processor awards control of a communications channel to the outbound path when the first voice present signal is asserted and the second voice present signal is asserted.

49. A system according to claim 42, wherein the processor adjusts at least the first voice threshold based upon the comparison of the first voice detection signal and the second voice detection signal.

50. A system according to claim 49, wherein the processor adjusts the first voice threshold in dependence upon the second voice detection signal.

51. A system according to claim 50, wherein the processor multiplies the second voice detection signal by a scale factor to adjust the first voice threshold.

52. A system according to claim 42, wherein the processor initiates at least one of the first voice threshold and the second voice threshold based upon a predetermined computation.

53. A system according to claim 42, wherein the inbound path is coupled to an input transducer.

54. A system according to claim 53, wherein the input transducer comprises a microphone.

55. A system according to claim 42, wherein the outbound path is coupled to an output transducer.

56. A system according to claim 55, wherein the output transducer comprises a speaker.

57. A system according to claim 42, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

58. A system according to claim 43, wherein the assertable first voice present signal is generated by comparing at least one of a first voice signal energy and a first voice signal envelope to the first voice threshold.

59. A system according to claim 43, wherein the assertable second voice present signal is generated by comparing at least one of a second voice signal energy and a second voice signal envelope to the second voice threshold.

60. A system according to claim 42, wherein the signal in the inbound path comprises at least a voice signal of a local user.

61. A system according to claim 42, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

62. A system according to claim 42, further comprising a comfort noise generator, the processor communicating with the comfort noise generator to generate

comfort noise at selected times based on at least one of the first voice detection signal and the second voice detection signal.

63. A system according to claim 42, further comprising an echo canceller, the echo canceller being coupled to the inbound path to cancel at least a portion of the signal in the outbound path.

64. A system according to claim 42, wherein the inbound channel further comprises a speech encoder module.

65. A system according to claim 42, wherein the outbound channel further comprises a speech decoder module.

66. A system according to claim 42, further comprising an interface to a modem transmitter module.

67. A system according to claim 42, further comprising an interface to a modem receiver module.

68. A system for managing speakerphone operation in a communications device, comprising:

first executable code, configured to receive input from an inbound path of the communications device, the first executable code generating at least a first voice detection signal based upon at least a first voice threshold applied to a signal in the inbound path;

second executable code, configured to receive input from an outbound path of the communications device, the second executable code generating at least a second voice detection signal based upon at least a second voice threshold applied to a signal in the outbound path; and

third executable code, the third executable code controlling at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal.

69. A communications system, comprising:

a communications device, the communications device comprising-

a first voice activity detector, configured to communicate with an inbound path, the first voice activity detector generating at least a first voice detection signal based upon at least a first voice threshold applied to a signal in the inbound path,

a second voice activity detector, configured to communicate with an outbound path, the second voice activity detector generating at least a second voice detection signal based upon at least a second voice threshold applied to a signal in the outbound path, and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal;

a transceiver; and

a wireless channel, coupled to the transceiver, the wireless channel configured to communicate with the inbound path and the outbound path of the communications device.

70. A system for managing speakerphone operation in a communications device, comprising:

voice activity detection means, communicating with each of an inbound path and an outbound path each of the communications device, the voice activity detection means generating at least a first voice detection signal based at least upon a first voice threshold applied to a signal in the inbound path and at least a second voice detection signal based at least upon a second voice threshold applied to a signal in the outbound path; and

processing means, configured to communicate with the voice activity detection means, the processing means controlling at least one of the inbound path and the outbound path based upon at least one of the first voice detection signal and the second voice detection signal.

71. A system for managing speakerphone operation in a communications device, comprising:

executable voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least a first voice detection signal based upon at least a first voice threshold applied to a signal in the inbound path and at least a second voice detection signal based upon at least a second voice threshold applied to a signal in the outbound path; and

a processor, configured to interface with the executable voice activity detection code, the processor controlling at least one of the inbound path and the outbound path based upon at least one of the first voice detection signal and the second voice detection signal.

72. A system for managing speakerphone operation in a communications device, comprising:

a processor, the processor being configured to execute-

voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least a first voice detection signal based upon a first voice threshold applied to a signal in the inbound path and at least a second voice detection signal based upon at least a second voice threshold applied to a signal in the outbound path, and

arbitration code, the arbitration code controlling at least one of the inbound path and the outbound path based upon at least one of the first voice detection signal and the second voice detection signal.

73. A system for managing speakerphone operation in a communications device, comprising:

a first voice activity detector, configured to communicate with an inbound path of the communications device, the first voice activity detector generating at least a first voice detection signal based upon a signal in the inbound path;

a second voice activity detector, configured to communicate with an outbound path of the communications device, the second voice activity detector generating at least a second voice detection signal based upon a signal in the outbound path; and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling speakerphone operation to award control of a communications channel to at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime.

74. A system according to claim 73, wherein the processor delays the awarding of control of the communications channel to the outbound channel when the inbound channel has control of the communications channel and the second voice detection signal is asserted, the delay being equal to the inbound hangtime.

75. A system according to claim 73, wherein the processor delays the awarding of control of the communications channel to the inbound channel when the outbound channel has control of the communications channel and the first voice detection signal is asserted, the delay being equal to the outbound hangtime.

76. A system according to claim 73, wherein the processor initializes at least one of the inbound hangtime and the outbound hangtime during a startup or reset operation.

77. A system according to claim 73, wherein the processor decrements at least one of the inbound hangtime and the outbound hangtime.

78. A system according to claim 73, wherein the processor increments at least one of the inbound hangtime and the outbound hangtime.

79. A system according to claim 73, wherein the first voice detection signal comprises an assertable first voice present signal and the second voice detection signal comprises an assertable second voice present signal.

80. A system according to claim 79, wherein the comparison comprises testing for the assertion of the first voice present signal and the second voice present signal.

81. A system according to claim 73, wherein the inbound path is coupled to an input transducer.

82. A system according to claim 82, wherein the input transducer comprises a microphone.

83. A system according to claim 73, wherein the outbound path is coupled to an output transducer.

84. A system according to claim 84, wherein the output transducer comprises a speaker.

85. A system according to claim 73, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

86. A system according to claim 73, wherein the first voice detection signal is generated by comparing at least one of a first voice signal energy and a first voice signal envelope to a first voice threshold.

87. A system according to claim 73, wherein the second voice detection signal is generated by comparing at least one of a second voice signal energy and a second voice signal envelope to a second voice threshold.

88. A system according to claim 73, wherein the signal in the inbound path comprises at least a voice signal of a local user.

89. A system according to claim 73, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

90. A system according to claim 73, further comprising a comfort noise generator, the processor communicating with the comfort noise generator to generate comfort noise at selected times based on at least one of the first voice detection signal and the second voice detection signal.

91. A system according to claim 73, further comprising an echo canceller, the echo canceller being coupled to the inbound path to cancel at least a portion of the signal in the outbound path.

92. A system according to claim 73, wherein the inbound channel further comprises a speech encoder module.

93. A system according to claim 73, wherein the outbound channel further comprises a speech decoder module.

94. A system according to claim 73, further comprising an interface to a modem transmitter module.

95. A system according to claim 73, further comprising an interface to a modem receiver module.

96. A method for managing speakerphone operation in a communications device, comprising:

generating at least a first voice detection signal based upon a signal in an inbound path of the communications device;

generating at least a second voice detection signal based upon a signal in an outbound path of the communications device; and

awarding control of a communications channel to at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime.

97. A method according to claim 96, the step of awarding control further comprises delaying the awarding of control of the communications channel to the outbound channel when the inbound channel has control of the communications channel and the second voice detection signal is asserted, the delay being equal to the inbound hangtime.

98. A method according to claim 96, wherein the step of awarding control further comprises delaying the awarding of control of the communications channel to the inbound channel when the outbound channel has control of the communications channel and the first voice detection signal is asserted, the delay being equal to the outbound hangtime.

99. A method according to claim 96, further comprising initializing at least one of the inbound hangtime and the outbound hangtime during a startup or reset operation.

100. A method according to claim 96, further comprising decrementing at least one of the inbound hangtime and the outbound hangtime.

101. A method according to claim 96, further comprising incrementing at least one of the inbound hangtime and the outbound hangtime.

102. A method according to claim 96, wherein the first voice detection signal comprises an assertable first voice present signal and the second voice detection signal comprises an assertable second voice present signal.

103. A method according to claim 102, wherein the comparison comprises testing for the assertion of the first voice present signal and the second voice present signal.

104. A method according to claim 96, wherein the inbound path is coupled to an input transducer.

105. A method according to claim 104, wherein the input transducer comprises a microphone.

106. A method according to claim 96, wherein the outbound path is coupled to an output transducer.

107. A method according to claim 106, wherein the output transducer comprises a speaker.

108. A method according to claim 96, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

109. A method according to claim 96, wherein the first voice detection signal is generated by comparing at least one of a first voice signal energy and a first voice signal envelope to a first voice threshold.

110. A method according to claim 96, wherein the second voice detection signal is generated by comparing at least one of a second voice signal energy and a second voice signal envelope to a second voice threshold.

111. A method according to claim 96, wherein the signal in the inbound path comprises at least a voice signal of a local user.

112. A method according to claim 96, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

113. A method according to claim 96, further comprising generating comfort noise at selected times based on at least one of the first voice detection signal and the second voice detection signal.

114. A method according to claim 96, further comprising canceling at least a portion of the signal in the outbound path.

115. A method according to claim 96, wherein the inbound channel further comprises a speech encoder module.

116. A method according to claim 96, wherein the outbound channel further comprises a speech decoder module.

117. A method according to claim 96, further comprising transmitting a signal to a modem transmitter module.

118. A method according to claim 96, further comprising receiving a signal from a modem receiver module.

119. A system for managing speakerphone operation in a communications device, comprising:

first executable code, configured to receive input from an inbound path of the communications device, the first executable code generating at least a first voice detection signal based upon a signal in the inbound path;

second executable code, configured to receive input from an outbound path of the communications device, the second executable code generating at least a second voice detection signal based upon a signal in the outbound path; and

third executable code, the third executable code controlling at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime.

120. A communications system, comprising:

a communications device, the communications device comprising-

a first voice activity detector, configured to communicate with an inbound path, the first voice activity detector generating at least a first voice detection signal based upon a signal in the inbound path,

a second voice activity detector, configured to communicate with the outbound path, the second voice activity detector generating at least a second voice detection signal based upon a signal in the outbound path, and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling at least one of the inbound path and the outbound path based upon at least a comparison of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime;

a transceiver; and

a wireless channel, coupled to the transceiver, the wireless channel configured to communicate with the inbound path and the outbound path of the communications device.

121. A system for managing speakerphone operation in a communications device, comprising:

voice activity detection means, communicating with each of an inbound path and an outbound path each of the communications device, the voice activity detection means generating at least a first voice detection signal based upon a signal in the inbound path and at least a second voice detection signal based upon a signal in the outbound path; and

processing means, configured to communicate with the voice activity detection means, the processing means controlling at least one of the inbound path and the outbound path based upon at least one of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime.

122. A system for managing speakerphone operation in a communications device, comprising:

executable voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least a first voice detection signal based upon a signal in the inbound path and at least a second voice detection signal based upon a signal in the outbound path; and

a processor, configured to interface with the executable voice activity detection code, the processor controlling at least one of the inbound path and the outbound path based upon at least one of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime.

123. A system for managing speakerphone operation in a communications device, comprising:

a processor, the processor being configured to execute-

voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least a first voice detection signal based upon a signal in the inbound path and at least a second voice detection signal based upon a signal in the outbound path, and

arbitration code, the arbitration code controlling at least one of the inbound path and the outbound path based upon at least one of the first voice detection signal and the second voice detection signal and at least one of an inbound hangtime and an outbound hangtime.

124. A system for managing speakerphone operation in a communications device, comprising:

a first voice activity detector, configured to communicate with an inbound path of the communications device, the first voice activity detector generating at least a first voice detection signal based upon a signal in the inbound path, the first voice detection signal comprising at least an assertable first voice present signal;

a second voice activity detector, configured to communicate with an outbound path of the communications device, the second voice activity detector generating at least a second voice detection signal based upon a signal in the outbound path; and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling speakerphone operation to transition control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted.

125. A system according to claim 124, wherein the inbound path is coupled to an input transducer.

126. A system according to claim 125, wherein the input transducer comprises a microphone.

127. A system according to claim 124, wherein the outbound path is coupled to an output transducer.

128. A system according to claim 127, wherein the output transducer comprises a speaker.

129. A system according to claim 124, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

130. A system according to claim 124, wherein the first voice detection signal is generated by comparing at least one of a first voice signal energy and a first voice signal envelope to a first voice threshold.

131. A system according to claim 124, wherein the signal in the inbound path comprises at least a voice signal of a local user.

132. A system according to claim 124, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

133. A system according to claim 124, further comprising a comfort noise generator, the processor communicating with the comfort noise generator to generate comfort noise at selected times based on at least one of the first voice detection signal and the second voice detection signal.

134. A system according to claim 124, further comprising an echo canceller, the echo canceller being coupled to the inbound path to cancel at least a portion of the signal in the outbound path.

135. A system according to claim 124, wherein the inbound channel further comprises a speech encoder module.

136. A system according to claim 124, wherein the outbound channel further comprises a speech decoder module.

137. A system according to claim 124, further comprising an interface to a modem transmitter module.

138. A system according to claim 124, further comprising an interface to a modem receiver module.

139. A method for managing speakerphone operation in a communications device, comprising:

generating at least a first voice detection signal based upon a signal in an inbound path of the communications device, the first voice detection signal comprising at least an assertable first voice present signal;

generating at least a second voice detection signal based upon a signal in an outbound path of the communications device; and

transitioning control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted.

140. A method according to claim 139, wherein the inbound path is coupled to an input transducer.

141. A method according to claim 140, wherein the input transducer comprises a microphone.

142. A method according to claim 139, wherein the outbound path is coupled to an output transducer.

143. A method according to claim 143, wherein the output transducer comprises a speaker.

144. A method according to claim 139, wherein the communications device comprises at least one of a cellular telephone, a voice-enabled network device, and a telephone device.

145. A method according to claim 139, wherein the first voice detection signal is generated by comparing at least one of a first voice signal energy and a first voice signal envelope to a first voice threshold.

146. A method according to claim 139, wherein the signal in the inbound path comprises at least a voice signal of a local user.

147. A method according to claim 139, wherein the signal in the outbound path comprises at least a voice signal of a remote user.

148. A method according to claim 139, further comprising generating comfort noise at selected times based on at least one of the first voice detection signal and the second voice detection signal.

149. A method according to claim 139, further comprising canceling at least a portion of the signal in the outbound path.

150. A method according to claim 139, wherein the inbound channel further comprises a speech encoder module.

151. A method according to claim 139, wherein the outbound channel further comprises a speech decoder module.

152. A method according to claim 139, further comprising transmitting a signal to a modem transmitter module.

153. A method according to claim 139, further comprising receiving a signal from a modem receiver module.

154. A system for managing speakerphone operation in a communications device, comprising:

first executable code, configured to receive input from an inbound path of the communications device, the first executable code generating at least a first voice detection signal based upon a signal in the inbound path, the first voice detection signal comprising at least an assertable first voice present signal;

second executable code, configured to receive input from an outbound path of the communications device, the second executable code generating at least a second voice detection signal based upon a signal in the outbound path; and

third executable code, the third executable code transitioning control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted.

155. A communications system, comprising:

a communications device, the communications device comprising-

a first voice activity detector, configured to communicate with an inbound path, the first voice activity detector generating at least a first voice detection signal based upon a signal in the inbound path, the first voice detection signal comprising at least an assertable first voice present signal,

a second voice activity detector, configured to communicate with an outbound path, the second voice activity detector generating at least a second voice detection signal based upon a signal in the outbound path, and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor transitioning control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted;

a transceiver; and

a wireless channel, coupled to the transceiver, the wireless channel configured to communicate with the inbound path and the outbound path of the communications device.

156. A system for managing speakerphone operation in a communications device, comprising:

voice activity detection means, communicating with each of an inbound path and an outbound path each of the communications device, the voice activity detection means generating at least a first voice detection signal based upon a signal in the inbound path, the first voice detection signal comprising at least an assertable first voice present signal, and at least a second voice detection signal based upon a signal in the outbound path; and

processing means, configured to communicate with the voice activity detection means, the processing means transitioning control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted.

157. A system for managing speakerphone operation in a communications device, comprising:

executable voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least a first voice detection signal based upon a signal in the inbound path, the first voice detection signal comprising at least an assertable first voice present signal, and at least a second voice detection signal based upon a signal in the outbound path; and

a processor, configured to interface with the executable voice activity detection code, the processor transitioning control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted.

158. A system for managing speakerphone operation in a communications device, comprising:

a processor, the processor being configured to execute-

voice activity detection code, receiving input from each of an inbound path and an outbound path each of the communications device, the executable voice activity detection code generating at least a first voice detection signal based upon a signal in the inbound path, the first voice detection signal comprising at least an assertable first voice present signal, and at least a second voice detection signal based upon a signal in the outbound path, and

arbitration code, configured to communicate with the voice activity detection code, the arbitration code transitioning control of a communications channel from the outbound path to the inbound path only when the first voice present signal is asserted.

159. An accessory system for enabling the management of speakerphone operation in a communications device, comprising:

a coupleable interface to the communications device;

a first voice activity detector, configured to communicate with an inbound path of the communications device, the first voice activity detector generating at least first voice data based upon a signal in the inbound path;

a second voice activity detector, configured to communicate with an outbound path of the communications device, the second voice activity detector generating at least second voice data based upon a signal in the outbound path; and

a processor, communicating with the first voice activity detector and the second voice activity detector, the processor controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data.

160. A system according to claim 159, wherein the accessory system comprises a battery system coupleable to the communications device.

161. A system according to claim 160, wherein the battery system comprises a microphone.

162. A system according to claim 160, wherein the battery system comprises a speaker.

163. A system according to claim 159, wherein the accessory system comprises a coupleable transducer.

164. A system according to claim 163, wherein the coupleable transducer comprises a headset device.

165. A system according to claim 164, wherein the headset device comprises a microphone.

166. A system according to claim 164, wherein the headset device comprises a speaker.

167. A system according to claim 163, wherein the coupleable transducer comprises a tabletop unit.

168. A system according to claim 167, wherein the tabletop unit comprises a microphone.

169. A system according to claim 167, wherein the tabletop unit comprises a speaker.

170. A system according to claim 167, wherein the coupleable interface comprises at least one of a serial interface, a parallel interface, an infrared interface and a radio frequency interface.

171. A method for enabling the management of speakerphone operation in a communications device using an accessory system, comprising:

coupling the accessory system to the communications device;

generating at least first voice data based upon a signal in an inbound path of the communications device;

generating at least second voice data based upon a signal in an outbound path of the communications device; and

controlling at least one of the inbound path and the outbound path based upon at least one of the first voice data and the second voice data..

172. A method according to claim 171, wherein the accessory system comprises a battery system coupleable to the communications device.

173. A method system according to claim 172, wherein the battery system comprises a microphone.

174. A method according to claim 172, wherein the battery system comprises a speaker.

175. A method according to claim 171, wherein the accessory system comprises a coupleable transducer.

176. A method according to claim 175, wherein the coupleable transducer comprises a headset device.

177. A method according to claim 176, wherein the headset device comprises a microphone.

178. A method according to claim 176, wherein the headset device comprises a speaker.

179. A method according to claim 176, wherein the coupleable transducer comprises a tabletop unit.

180. A method according to claim 179, wherein the tabletop unit comprises a microphone.

181. A method according to claim 179, wherein the tabletop unit comprises a speaker.

182. A method according to claim 171, wherein the step of coupling comprises coupling via at least one of a serial interface, a parallel interface, an infrared interface and a radio frequency interface.